Our Dermatology Online

Case Letter

# Inflammatory tinea capitis

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Sir,

Tinea capitis is a dermatophytic infection of the hair shaft and scalp, and it is considered one of the most common dermatoses in pediatric practice. Herein, we present two cases of inflammatory tinea capitis.

## CASE 1

A twelve-year-old male patient consulted his pediatrician for a scalp lesion that had progressively enlarged. He was prescribed cefadroxil and sulfur soap; however, due to lack of improvement, he was referred for dermatological evaluation. On examination, there was a localized trichopathy on the scalp characterized by alopecia and honey-colored crusts measuring approximately 4 cm in diameter (Fig. 1). Additional findings included erythematous scaly plaques with hemorrhagic crusts on the forehead and left forearm (Figs. 2a and 2b). There was no significant personal or family history.

Based on the clinical presentation, a diagnosis of inflammatory tinea capitis was established, and KOH preparation and fungal culture of the hair were requested. The KOH preparation revealed microsporic endothrix hair invasion (Fig. 3a), and *Trichophyton tonsurans* was isolated on culture (Fig. 3b).

With these findings, the clinical and mycological diagnosis of inflammatory tinea capitis was confirmed. The patient was treated with griseofulvin 250 mg after lunch for six weeks, achieving complete resolution of the lesion (Figs. 4a – 4c).

## CASE 2

A six-year-old female patient presented with a scalp lesion of three months' duration, initially described as persistent "dandruff." She had been treated by a general practitioner with a topical cream for fifteen days without improvement and was subsequently referred to our clinic. Dermatologic examination revealed localized trichopathy on the scalp consisting of an erythematous, scaly, alopecic plaque with hematic crusts (Fig. 5a). Dermoscopy demonstrated an erythematous, scaly, alopecic plaque (Fig. 5b).

A clinical and mycological diagnosis of inflammatory tinea capitis was made. KOH preparation of the hair showed microsporic endothrix invasion (Fig. 6).

These findings confirmed the clinical and mycological diagnosis of inflammatory tinea capitis. The patient was treated with one-quarter tablet of griseofulvin after lunch for six weeks, achieving complete remission of the lesion (Fig. 7).

Inflammatory tinea of the scalp refers to a superficial infection involving the scalp skin and hair shafts. It is mainly caused by dermatophytes of the genera *Trichophyton* and *Microsporum* [1]. This condition is characterized by hair invasion with distinct patterns (ecto-endothrix and endothrix) and variable degrees of inflammation, often going unnoticed in its initial stages.

Although primarily considered a childhood mycosis, in recent years, cases have also been described in adults, particularly in immunocompromised individuals [1]. Consequently, it remains a public health issue that predominantly affects children but not exclusively. Notably, there are marked geographic variations: in the Americas, *Trichophyton tonsurans* predominates, whereas *Microsporum canis* remains more prevalent in other regions [1-4].

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**Figure 1:** Trichopathy on the scalp characterized by alopecia and honey-colored crusts.

**Figure 2:** (a and b) Erythematous scaly plaques with hematic crusts on the forehead and left forearm.

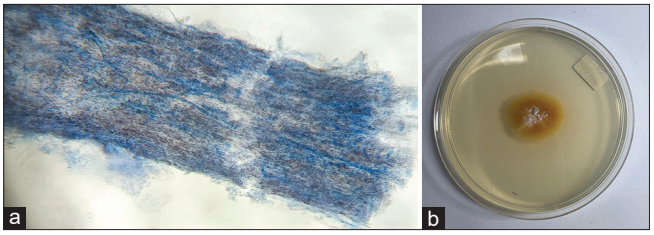


**Figure 3:** (a) KOH showing a microsporic endothrix hair invasion. (b) *Trichophyton tonsurans* isolated.

The main causative agents are *Trichophyton tonsurans* and *Microsporum canis* [4]. In Latin American countries, there has been a progressive shift toward *Trichophyton*, displacing *Microsporum* to a

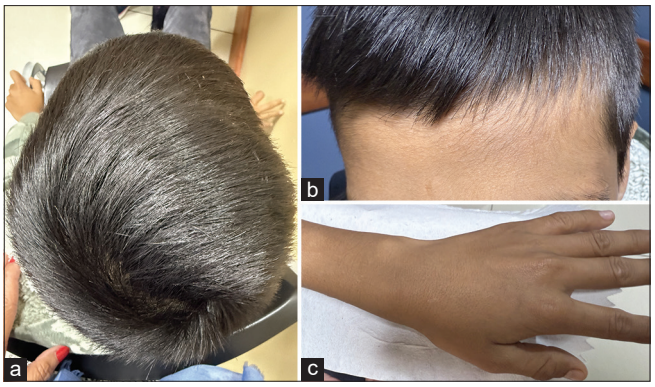


**Figure 4:** (a-c) Complete resolution of the lesion after six weeks of treatment.

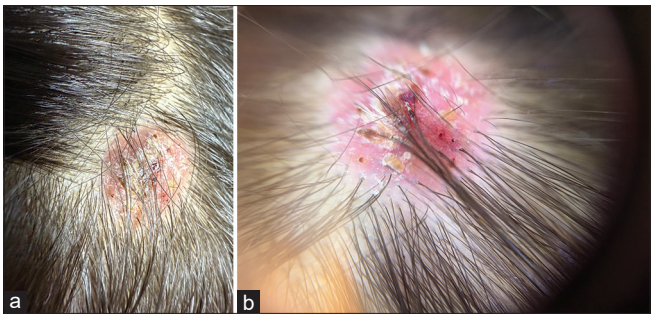


**Figure 5:** (a) Erythematous, scaly, alopecic plaque with hematic crusts. (b) Dermoscopy demonstrating an erythematous, scaly, alopecic plaque.

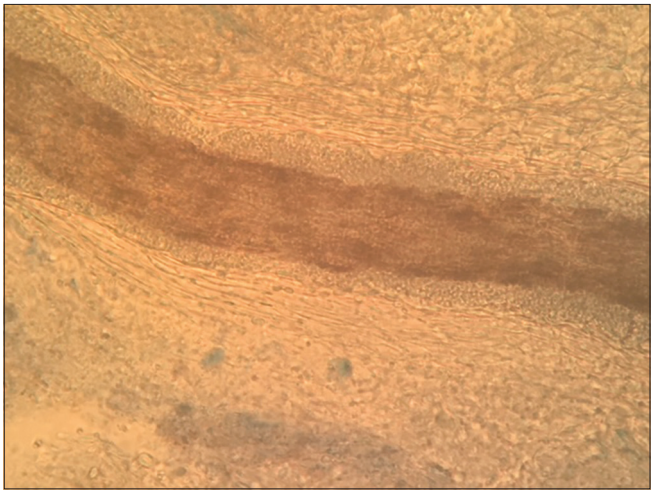

**Figure 6:** KOH preparation of the hair showing a microsporic endothrix invasion.

secondary role. This epidemiologic change significantly influences both the course of the disease and the response to treatment [5-6].

Inflammatory tinea of the scalp does not present in a single way; it may appear as erythematous, scaly patches with alopecia, honey-colored or hemorrhagic crusts,

**Figure 7:** Complete resolution of the lesion after six weeks of treatment.

black dots, and areas of diffuse hair loss [1,2,4]. Among the variants, kerion deserves special mention, as it presents as an infiltrated, suppurative, alopecic plaque that, if untreated, can lead to scarring alopecia [3].

Dermoscopy and trichoscopy provide very useful diagnostic clues such as comma hairs, corkscrew hairs, and black dots [7].

Diagnosis should combine clinical evaluation with dermoscopy and, most importantly, mycological studies. Direct examination with KOH and fungal culture remain essential tests to confirm the etiological agent [2,3,5]. Dermoscopy also helps differentiate this mycosis from other dermatoses and reveals hair shaft patterns that may not be visible to the naked eye [3,7].

Effective management relies on systemic antifungal therapy, since topical agents alone do not adequately penetrate the hair follicle [5]. Griseofulvin and terbinafine remain the first-line drugs, chosen according to the species identified (*Microsporum* vs. *Trichophyton*) [7]. Itraconazole or fluconazole may be used as alternatives in selected situations [5].

Adjunctive use of antifungal shampoos, such as selenium sulfide or ketoconazole, is helpful to reduce fungal load and limit transmission but does not replace systemic treatment. Therapy is typically maintained for 4 to 8 weeks and adjusted based on clinical evolution and mycological results [5,7].

Early treatment shortens disease duration and prevents scarring alopecia [3]. Although inflammatory tinea of the scalp is still more common in children, mycological confirmation and follow-up are equally important in adults to avoid complications and reduce transmission in school and household settings [5]. Hygiene education and early detection of contacts can markedly improve the course and prognosis of the disease [6].

## Consent

The examination of the patient was conducted according to the principles of the Declaration of Helsinki.

The authors certify that they have obtained all appropriate patient consent forms, in which the patients gave their consent for images and other clinical information to be included in the journal. The patients understand that their names and initials will not be published and due effort will be made to conceal their identity, but that anonymity cannot be guaranteed.

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